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Society of Asian Academic Surgeons

COVID-19 Positivity Following an In-Person Surgical Society Meeting: A Cross-Sectional Survey Study



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ABSTRACT

Introduction: Many surgical societies have recently resumed in-person meetings after canceling or adopting virtual formats during the COVID-19 pandemic. These meetings implemented safety measures to limit viral exposure and ensure participant safety. While there have been anecdotal reports of COVID-19 cases after attendance, no large-scale assessments have been undertaken. The objective of this study was to evaluate COVID-19 positivity following an in-person surgical society meeting.

Methods: An online survey was administered to participants of the Society for Asian Academic Surgeons annual meeting, which was held in Chicago, Illinois in September 2021. This survey assessed vaccination status, in-person versus virtual conference attendance, and COVID-19 testing and symptoms in the 7 d immediately following the meeting.

Results: Among the 220 meeting participants, 173 attended in person (79%). There were 91 survey respondents (41% response rate): 67% attending physicians, 27% trainees, and 6% medical students. Nearly, all (99%) reported being fully vaccinated against COVID-19. COVID-19 testing was sought within 7 d of the meeting by 15% of in-person respondents, and all reported negative results. Among individuals who were not tested, no one reported development of symptoms (cough, shortness of breath, fever, new loss of taste/smell, etc.).

Conclusions: Among in-person attendees of a recent surgical society meeting, no one reported positive COVID-19 testing after the meeting, and individuals who were not tested denied developing symptoms. While these results are encouraging, societies hosting

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meetings should continue to proactively assess the safety of in-person meetings to promptly identify outbreaks and opportunities for improvement.

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Introduction

Restriction of mass gathering events was one of the first measures taken to slow the transmission of COVID-19 at the start of the pandemic.¹ Academic conferences adhered to these guidelines, and most medical societies either canceled meetings or transitioned to a virtual platform at the beginning of March 2020.² However, with the development of a COVID-19 vaccine and nationally declining case numbers, many large surgical societies resumed in-person meetings in mid-2021.

Rates of COVID-19 transmission at such meetings remain unknown. Limited research has suggested increased case numbers after indoor sporting events and concerts, but these studies are challenging and often rely on inferences from population-level data rather than prospective data from individuals.^{3–6} Furthermore, attendees of surgical conferences differ from the general population in key aspects: they are at increased risk of occupational exposure yet vaccinated at a much higher rate and are more likely adherent to mask guidelines.^{7,8} The question of COVID-19 transmission at in-person academic meetings is therefore a unique one. While the authors are aware of at least one case of COVID-19 after attendance at a surgical conference in 2021, reports of such cases have been largely anecdotal. There is therefore, a need to formally inquire with participants about whether they developed COVID-19 after conferences. The objective of this study is to evaluate rates of COVID-19 positivity following attendance at an in-person surgical society meeting to provide guidance for upcoming surgical conferences.

Materials and Methods

Attendees of the annual meeting of the Society for Asian Academic Surgeons (SAAS) were recruited to participate in a cross-sectional survey. The meeting was held in September 2021 in Chicago, Illinois at Northwestern University Feinberg School of Medicine. The primary meeting room had a maximum capacity of 255 persons. Food and drink were only allowed in the atrium area of the building, with a maximum capacity of 250 persons.

The survey was developed by the study authors and contained questions assessing demographics, vaccination status, conference attendance modality (in-person versus virtual), and COVID-19 testing and symptoms in the 7 d immediately after the meeting. COVID-19 boosters were not approved at the time of the meeting and were therefore not assessed. Report of positive testing prompted additional questions on disease course. The survey was pilot tested via cognitive interviews with 14 general surgery research residents, who were not included in the final results. The survey was administered via an online Qualtrics platform (Qualtrics, Provo, UT). The institutional review board at Northwestern University deemed this

study exempt research because data were derived from anonymous surveys. The survey is available in [Appendix A](#).

Results

There were 220 total registrants; 179 (79%) attended the meeting in-person and 41 (21%) attended virtually. Three staff members, in addition to the registrants, were present for the duration of the meeting. Among the 91 survey respondents, which represented 41% of meeting participants, 78% attended the meeting in-person and 22% attended virtually. Among the respondents, 67% were attending physicians, 27% trainees, and 6% medical students. Concerns about traveling during the pandemic were cited by 53% of individuals who attended virtually, while 47% did not attend in-person due to other obligations. The vast majority (99%) of participants reported being fully vaccinated against COVID-19 at the time of the meeting ([Table 1](#)).

Among individuals who attended in-person, no one reported development of symptoms (cough, shortness of breath, fever, chills, new loss of taste or smell, etc.) after the meeting. COVID-19 testing was sought by 15% of in-person respondents within 7 d of returning from the meeting. The most common reason for being tested was “I wanted to ensure that I had not contracted COVID-19” (73%). Among individuals who were tested, all were negative for COVID-19 ([Table 1](#)).

Discussion

As surgical societies begin to resume in-person conferences, it is necessary to evaluate their safety with regard to risk of

Table 1 – COVID-19 vaccination, testing, and development of symptoms among in-person attendees of a surgical society meeting.

Characteristic	No. (%) Total N = 71
Fully vaccinated against COVID-19	
Yes	70 (99)
No	1 (1)
Underwent COVID-19 testing	
Yes	11 (15)
Positive test results	0 (0)
Negative test results	11 (100)
No	60 (85)
Developed COVID-19 symptoms*	
Yes	0 (0)
No	60 (100)

* This question was asked only of in-person participants who did not undergo COVID-19 testing (N = 60).

COVID-19 exposure, as relying on anecdotal reports alone may miss the opportunity to identify outbreaks promptly and inform participants. The 2021 annual meeting of SAAS was attended in-person by 79% of participants. The survey data demonstrated no positive COVID-19 test results, and every individual who was not tested denied developing symptoms.

Organizers of the SAAS meeting took several precautions to prevent the spread of COVID-19. There was social distancing at presentations, limited serving of food and beverages, and enforced mask guidelines, including availability of cloth and medical grade masks at the registration desk. Vaccination was not required to attend the meeting but was strongly encouraged. Prior simulation studies have demonstrated reduced viral transmission at indoor events with similar spaced seating and mask use, but few studies have investigated actual cases of COVID-positivity after large gatherings, particularly with a highly vaccinated population such as ours.⁹ In the current survey, despite high rates of in-person attendance, no one reported positive testing immediately following the meeting. It is possible that there were positive cases among individuals who were not tested, though none of these participants reported development of symptoms. Overall, the results of this survey suggested that the safety measures taken were effective in preventing the transmission of COVID-19.

There are limitations to this survey data. It is self-reported; therefore, a response bias may have limited reporting of a positive test or COVID-19 symptoms. We were unable to capture asymptomatic cases that were not tested. It would also be difficult to discern whether a person who tested positive contracted the virus at the meeting or in traveling to and from the meeting. However, in either case transmission would generally be considered to relate to meeting attendance and would therefore be important to evaluate. It should also be noted that with fewer than 200 participants, this meeting was relatively small compared to other national meetings. Measures to prevent transmission of COVID-19 are likely more effective on a smaller scale, and therefore, organizers of larger conferences may need to consider additional or more stringent guidelines. Furthermore, at the time of the meeting, COVID-19 rates were relatively low, with a daily average of approximately, 100,000 new cases per day nationally (*versus* over 450,000 cases per day in January 2022).¹⁰ While this survey was administered to participants of one academic conference, study of other meetings, at other points in the pandemic, could generate more complete insight into the risk of COVID-19 transmission with in-person attendance.

While data from the current survey did not show any positive cases, the pandemic continues to evolve with new variants and therefore the safety of in-person conferences must continue to be evaluated. Societies should be similarly proactive in assessing their membership immediately following meetings and create ways for participants to report positive cases. They should also be forthcoming in sharing experiences with other societies to help improve safety measures for all conferences. The numerous in-person surgical society meetings scheduled for 2022 will likely draw hundreds of participants, and it is important to ensure that these meetings are as safe as possible to prevent transmission and further infections.

Conclusions

Many surgical societies have resumed in-person meetings with safety measures in place to prevent transmission of COVID-19. In its evaluation of one such meeting, this study shows that though the majority of participants elected to attend in-person, no one reported positive COVID-19 testing or development of symptoms following the meetings. These results should be considered as academic societies plan future in-person events.

Supplementary Materials

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.jss.2022.04.067>.

Author Contributions

Drs Silver, Wang, Kim, and Bilimoria were involved in concept development and study design. All authors contributed to survey development, and Drs Wang and Kim distributed the survey. Dr Silver authored this manuscript, and all authors contributed to manuscript editing.

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Disclosure

None declared.

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